

CLAIMS

1. A light distribution control element including a transparent base member, a number of micro-lenses densely arranged on one face of the transparent base member and a light absorbing layer having very small opening portions substantially at focal positions of the micro-lenses, the light distribution control element characterized in that the transparent base member is constituted of a transparent body which is substantially isotropic optically or a transparent body having uniaxial optical anisotropy.

2. A light distribution control element including a transparent base member, an adhering agent layer formed on one face of the transparent base member and a number of very small spherical transparent beads embedded in and fixed to the adhering agent layer, the light distribution control element characterized in that the adhering agent layer is constituted of hot melt adhering agents obtained by laminating a transparent layer and a colored layer in this order on the transparent base member and the transparent base member is constituted of a transparent body which is substantially isotropic optically or a transparent body having uniaxial optical anisotropy.

3. The light distribution control element according to Claim 1, wherein the transparent base member comprises a glass plate, a triacetylcellulose film, a non-elongated polycarbonate film or an injection-molded acrylic resin.

4. The light distribution control element according to Claim 2, wherein the transparent base member comprises a

glass plate, a triacetylcellulose film, a non-elongated polycarbonate film or an injection-molded acrylic resin.

5. A liquid crystal display apparatus including a pair of transparent substrates of a lamination of transparent electrodes and orientation films and being bonded to each other with a constant clearance therebetween while orientation films formed faces opposed to each other, a liquid crystal layer enclosed in the clearance, voltage applying means for applying a voltage corresponding to an image signal across the transparent electrodes and a polarizer and an analyzer disposed on a light incident face side and a light emitting face side of the pair of transparent substrates, the liquid crystal display characterized in that a rear face of each of the pair of transparent substrates is provided with a backlight apparatus for emitting substantially parallel light and the light emitting face side of the pair of transparent substrates is provided with a light distribution control element comprising a transparent base member, a number of micro-lenses densely arranged on one face of the transparent base member and a light absorbing layer having very small opening portions substantially at focal positions of the micro-lenses, the light distribution control element being a light distribution control element in which the transparent base member is constituted of a transparent body which is substantially isotropic optically or a transparent body having uniaxial optical anisotropy.

6. The liquid crystal display apparatus according to Claim 5, wherein the light emitting face side of each of the pair of transparent substrates is provided with a light distribution control element comprising the transparent

base member, adhering agent layers formed on one face of the transparent base member and a number of very small spherical transparent beads embedded in and fixed to the adhering agent layers, the adhering agent layers being constituted of hot melt adhering agents obtained by laminating a transparent layer and a colored layer in this order on the transparent base member; the transparent base member is constituted of the 10 transparent body which is substantially isotropic optically or the transparent body having the uniaxial optical anisotropy.

7. The liquid crystal display apparatus according to Claim 5, wherein the light incident face side of each of the pair of transparent substrates is provided with a polarizer and the light emitting face side is provided with an analyzer and the light distribution control element in this order from a side of the transparent base member; and a transmission axis of linearly polarized light of the analyzer is arranged in a horizontal direction relative to a display face.

8. The liquid crystal display apparatus according to Claim 5, wherein the light incident face side of each of the pair of transparent substrates is provided with a polarizer, the light emitting face side is provided with an analyzer and the light distribution control element in this order from a side of the transparent substrate, and a phase contrast plate is interposed between the analyzer and the light distribution control element.

9. The liquid crystal display apparatus according to Claim 6, wherein the light incident face side of each of the pair of transparent substrates is provided with a

polarizer and the light emitting face side is provided with an analyzer and the light distribution control element in this order from a side of the transparent base member; and a transmission axis of linearly polarized light of the analyzer is arranged in a horizontal direction relative to a display face.

10. The liquid crystal display apparatus according to Claim 6, wherein the light incident face side of each of the pair of transparent substrates is provided with a polarizer, the light emitting face side is provided with an analyzer and the light distribution control element in this order from a side of the transparent substrate, and a phase contrast plate is interposed between the analyzer and the light distribution control element.